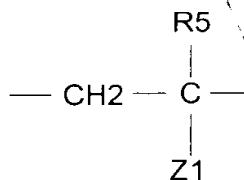


Please amend Claims 1 - 3 as follows:

B2
Sub C1

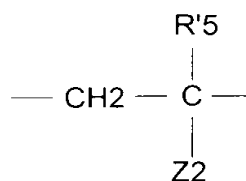
1. (Amended) A cement slurry intended to be set in a wellbore through at least one geologic formation having a certain permeability, characterized in that it comprises cement, at least one mineral filler consisting of silica with grain size ranges between 5 and 200 μm , water and a determined amount of at least one polymer with hydrophilic (Hy) and hydrophobic (Hb) units in aqueous solution, said polymer having the following structure: ---(Hb)---(Hy)--- with a statistical distribution, and:

- Hy has the following form:



where R5 is or CH₃, and Z1 is COOH or CONH₂ or CONHR¹SO₃, or CONHR¹I, R¹I is CH₃;

- Hb has the following form:



where R'5 is H or CH₃ and Z2 is COOR⁷, C₆H₄SO₃H, COOR¹, CONR¹R¹ or CONR¹R⁷, R⁷ being a non-ionic surfactant consisting of an alkyl polyoxyethylene chain, R¹ is H or a C₁-C₃₀ alkyl, aryl or alkyl-aryl radical, and R¹ is a C₉-C₃₀ alkyl, aryl or alkyl-aryl radical,

wherein said polymer has a molecular mass ranging between 500000 and 10⁷ daltons.

B2
Cont.

2. (Amended) A slurry as claimed in claim 1, wherein said polymer has a proportion of hydrophobic units Hb ranging between 0.5 and 60 %.

Sub C3

3. (Twice Amended) A slurry as claimed in Claim 1, comprising at least one of the polymers selected from the group consisting of:

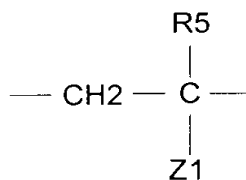
- HMPAM, where R5 is H and Z1 is CONH2, R'5=CH3 and Z2 is COOR'I with R'1=C9H19,
- S1, S2 where R5 is H and Z1 is CONH2, R'5=H and Z2 is C6H4SO3H.

Please add the following new Claims 8 - 10:

B2
Sub C5

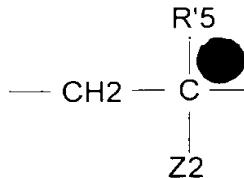
8. A cement slurry intended to be set in a wellbore through at least one geologic formation having a certain permeability, characterized in that it comprises cement, at least one mineral filler, water and a determined amount of at least one polymer with hydrophilic (Hy) and hydrophobic (Hb) units in aqueous solution, said polymer having the following structure: —(Hb)—(Hy)— with a statistical distribution, and:

- Hy has the following form:



where R5 is H or CH3, and Z1 is COOH or CONH2 or CONHR1SO3, or CONHR'I, R'I is CH3;

- Hb has the following form:



where R'5 is H or CH₃ and Z2 is COOR₇, C₆H₄SO₃H, COOR'₁, CONR₁R'₁ or CONR₁R₇, R₇ being a non-ionic surfactant consisting of an alkyl polyoxyethylene chain, R₁ is H or a C₁-C₃₀ alkyl, aryl or alkyl-aryl radical, and R'₁ is a C₁-C₃₀ alkyl, aryl or alkyl-aryl radical,

wherein the mineral filler consists of silica whose grain size ranges between 5 and 200 μm and microsilica whose grain size ranges between 0.1 and 20 μm and a small water content of 30 cc for 144 g of solids (cement, silica and microsilica).

9. A slurry as claimed in Claim 8, wherein the polymer is Hb1 where R₅ is H, Z₁ is COOH, R'₅ is H and Z₂ is COOR'₁ with R'₁ being C₄, comprising about 80% of (hy) units, and of molecular mass ranging between 10⁴ and 5·10⁴.

10. A slurry as claimed in claim 9, wherein said polymer is Hb1 at a concentration ranging between 0.5 and 5 % by weight.--